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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09 876,459 | 06.07/2001 | Travis A. Lemke | 54197-237098 | 9195 |

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EXAMINER

SOOHOO, TONY GLEN

ART UNIT

PAPER NUMBER

1723

DATE MAILED: 11/18/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/876,459

Applicant(s)

LEMKE, TRAVIS A

Examiner

Tony G Soohoo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 September 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Specification

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claim 12 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification fails to adequately describe the pressure vacuum vessel and the manner in which the pressure vacuum vessels are attached to the system, and the manner in which the pressure vacuum vessels operate to produce the recited motivation of the components through the system. The specification fails to point out any structure as a "pressure vacuum vessel". The scope of this term is read as best understood in light of the specification as a liquid pump.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-5, 12-13 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted elements are: a

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structural wall or container to define the "mix volume". The term "mix volume" only defines a dimensional space measurement and does not define a physical structure itself, such as a "vessel" or "container". This reading of this interpretation of the term is further supported by the evidence of claim 6 whereby the "mix volume" is later pointed out that it is a "mix vessel". Accordingly, since claim 1 deemed to be broader in interpretation of "mix volume" since claim 6 supports that the "mix volume" is not a vessel or a container until the presentation of claim 6, the structure as presented in claims 1-5, 12-13 are absent of any physical structure that may sufficiently perform the function to enclose the fluid so as to provide mixing of the liquid in a "mix volume".

Therefore the claims are structurally incomplete to perform the recited operation.

Additionally, claims 4-5 do not point out that the mix volume has a positive structure such that it may be physically made of a particular material. Thus the recitation of claims 4 and 5 that the mix volume is made of a particular material is structurally incomplete, or at the very least, fails to provide antecedent basis for the mix volume having a physical property such that it can be made of a particular material.

3. Claims 10 and 11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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Claims 10 and dependent claim 11, ultimately depend upon claim 29.

However there is no claim 29. Accordingly, the scope of the claim is unclear and can not be examined.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-3 and 12-13 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Lascombes 5318750.

Note: With regards to the function of the use of solid particles as one mix component, has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Ex parte Masham, 2 USPQ2d 1647 (1987).

Lascombes teaches a mix volume conduit between 210, 220, 230, 240, 250 and 31 which is connected to source components 1,2,3,4,5 having solid particulate salt; a control system 300, first sensors 210, 220, 230, 240, 250 for each source and including a pH conductivity sensor meter 200, 201 for measuring the amount of solid component dissolved in the mixed volume of liquid; and respective valves 110, 120, 130, 140, 150 to

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regulate the chemical components via control 300; and a pump 31 for vacuum pressure to urge the fluid into motion.

6. Claims 1-2, and 12 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Chan et al 5647391.

Note: With regards to the function of the use of solid particles as one mix component, has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Ex parte Masham, 2 USPQ2d 1647 (1987).

Chan et al (Chan) teaches a mix volume vessel 10, 14 which is connected to source components 22, 26; a control system 28, a first sensor 36 and sensor signal for each source whereby probe is a conductivity sensor meter 36 for measuring the amount of component(s) in the mixed volume of liquid; and respective peristaltic vacuum pump valves 30, 32 to regulate the chemical components via control 300 and control signal.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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8. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chan et al 5647391.

The Chan reference discloses all of the recited subject matter as defined within the scope of the claims with the exception of particular material of the tank 14 being of the group of claims 4 and 5.

It is noted that the materials of UHMW polyethylene, fluorinated polymer such as PTFE, or polypropylene, is commonly known in the art for the property of the resistance to corrosion and stains, and the ease of cleaning.

Since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice, In re Leshin, 125 USPQ 416, It is deemed that it would have been obvious to one of ordinary skill in the art to make the mix vessel 14 out of UHMW polyethylene, fluorinated polymer such as PTFE, or polypropylene, such that one may provide resistance to corrosion and stains, and the ease of cleaning of the inside of the tank that may occur due to the mixed fluid.

9. Claims 3-6, 8 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chan et al 5647391 in view of Lascombes 5318750.

The Chan reference discloses all of the recited subject matter as defined within the scope of the claims with the exception of a 1st sensor for detecting the amount of chemical added to the mix volume vessel 14 (claim 3), and with the

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exception of the tank 14 having an outlet to remove the mixture vessel 14 to a point of use.

The Lascombes reference as pointed out above, teaches the use of both a 1st sensor to measure the amount of source material added to the mixture and a 2nd pH conductivity mixture to measure the final mixture. Also Lascombes teaches the use of an outlet 30 to send the mixture to a final point of use 100.

In view of the teaching of Lascombes that a more accurate control of the mixture may be performed with the use of both a 1st sensor to measure the source and a 2nd sensor to measure the mixture, it is deemed that it would have been obvious to one of ordinary skill in the art to provide for the device of Chan, with a 1st sensor at each of the sources 22, 26 in connection with the control 28 as shown by Lascombes such that one may better control the additive amount of the source components in addition to monitor the final mixed product in the mix vessel 14.

Also, in view of the teaching of teaching that one may provide an outlet to a volume whereby a mixture is made such that it may be dispensed to a final use point, it is deemed that it would have been obvious to one of ordinary skill in the art to provide with Chan et al with an outlet so that one may easily use and dispense the mixture 12 which was made in the tank 14 for final use.

10. Claims 7 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chan et al 5647391 in view of Lascombes 5318750 as applied to claim 6 above, and further in view of Leverenz et al 3710811.

The Chan et al reference as modified by the Lascombes reference discloses all of the recited subject matter as defined within the scope of the claims with the exception of a recirculation loop.

The Leverenz et al reference teaches that a mix volume tank 14 or 12, may be provided with a recirculation loop 38, 16, 38 to that it may proper mixture while also providing a means to add additional source material via tank 20 in response to the concentration sensor 18. In view of teaching of Leverenz et al that one may provide a recirculation loop in the mix volume vessel for a better manner to maintain the desired concentration of material mixture in a mix vessel, it is deemed that it would have been obvious to one of ordinary skill in the art to provide for the mix vessel tank 14 of Chan et al with a recirculation line connected back to the tank such that the concentration maintained by the tank 14 is better maintained.

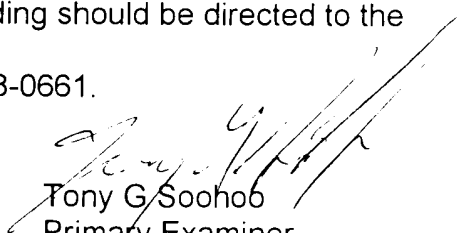
Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following disclose devices which sense conductivity or concentration in control of the feed of sources for mixture concentration: Ferri, Jr et al 5874049, Switall 4823987, Beattie 4976546, Moss 3877682, Jonsson et al 6149294, and 4784495, and 5511875, Suzuki et al 5800056, Knechtel et al 3699992, Taylor 4776977, Peltzer 6224778, Minns, Jr 3870065, Nystuen 3680070, Munroe et al 6224252, Pozniak et al 6247838, O'Dougherty et al

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5522660, Ludt 3820014, Mills et al 4968420, Copeland et al 5137694, and Thomsen 4474476.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tony G Soohoo whose telephone number is (703) 308-2882. The examiner can normally be reached on 7:00 AM - 5 00 PM, Tues. - Fri.. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



Tony G Soohoo
Primary Examiner
Art Unit 1723

tgs